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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 December 2009</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,3,4,7-9,13-16,18-30,33-43,45-49,51-55 and 57-65</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,3,4,7-9,13-16,18-30,33-43,45-49,51-55 and 57-65</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>06 July 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

     1.☐ Certified copies of the priority documents have been received.

     2.☐ Certified copies of the priority documents have been received in Application No. _____.

     3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   In view of the Pre_Brief Conference Request filed on 12/28/09, PROSECUTION

IS HEREBY REOPENED. A non-final office action is set forth below.

To avoid abandonment of the application, appellant must exercise one of the

following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed

by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and

appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth

in 37 CFR 41.20 have been increased since they were previously paid, then appellant

must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by

signing below:

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

4.   Claims 1, 3-4, 7-9, 13-16, 18-30, 33-43, 45-49, 51-55, and 57-65 are rejected under 35

U.S.C. 103(a) as being unpatentable over Forssell Mica (EP 1006695) in view of Bruckert et

al. (US 5,485,631).

For claim 1, Forssell Mica discloses method and arrangement for transferring real time

data in a packet radio network, comprising:

monitoring a length of a data queue in a first network element as an indication of

future need of communication resources in a first network element (the Countdown

Value field CV is sent by the mobile station to allow the network to calculate the number

of RLC data blocks remaining for the current uplink (monitoring a length of a data queue

means), paragraph [0057], lines 5-6), wherein the indication comprises a coded value of

the length of the data queue in the first network element , and wherein the length of the

data queue is embedded in a data block from the first network element (the RLC/MAC

data block include information (the indication means) on whether the mobile station has

more RLC data blocks to be transmitted, and this information provided to the network in

the RLC/MAC header (the information or CV' value or the length of the data queue, is

embedded in a data block means) and this field is called CV' (CV' may replace all or

part of the CV field in the prior art), a coded value of the length of the data queue

means), paragraph [0061], lines 1-4); and

the communications resources based for a transmission between the first

network element and a second network element based on the indication (the mobile

station (the first network element means) transfer delay sensitive data to the network (a

second network element means) and the CV' is different than 0 (based on the indication

means) the network interprets that the mobile station has more data blocks to be

transmitted and the network assign (allocating means) the next uplink transmit

permission for the same mobile station, paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose allocating the communications

resources. In an analogous art, Bruckert et al. disclose allocating the communications

resources (the site controller (300) responds with resource allocation (401) (allocating

the communications resources means) and the resource allocation (401) is transmitted

to the requesting communication unit (200), col. 6, lines 16-21).

One skilled in the art would have recognized the allocating the communications

resources, and would have applied Bruckert et al.'s allocation resource in Forssell Mica's

assign the next uplink transmit permission for the mobile station. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention, to use

Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell Mica's

method and arrangement for transferring real time data in a packet radio network with the

motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 3, Forssell Mica discloses wherein the indication comprises information about a transmit buffer of the first network element (the mobile station checks in step 510, whether the RLC block is the last one in the buffer, if it is the mobile station sets the parameter CV"= 0 means, paragraph [0068]).

For claim 4, Forssell Mica discloses wherein the indication comprises information on the additional resources needed for said first network element (the CV' is different than 0 (information on the additional resources means) the network interprets that the mobile station has more data blocks to be transmitted and the network assign the next uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

For claim 7, Forssell Mica discloses wherein the first network element is a mobile station and the second network element is a base station of a wireless communication network (the mobile transmitted RLC/MAC data block to the network (base station means), paragraph [0061], lines 1-2).

For claim 8, Forssell Mica discloses method and arrangement for transferring real time data in a packet radio network, comprising:

a plurality of first stations (mobile data terminals 151 means, paragraph [0007], line 8);

a second station connected to said plurality of first stations through a plurality of communication links (mobile data terminals 151 via base station 152 means, paragraph [0007], line 8);

a controller control of the communication resources among the communications links, wherein the control being separate and independent from the first stations (figure 2, a radio

resource control (RRC) layer 207, protocol layer between the mobile station MS and the base

station subsystem BSS (the control being separate and independent from the first stations

means), paragraph [0011], lines 1-5),

said controller control of the communication resource is performed in accordance

with information transmitted from the first stations and wherein the information from each

of the first stations comprises a data block embedding a coded value of a lengths of a data

queues in each of the first stations (the Countdown Value field CV is sent by the mobile

station to allow the network to calculate the number of RLC data blocks remaining for

the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block include

information (the information means) on whether the mobile station has more RLC data

blocks to be transmitted, and this information provided to the network (said controller

control of the communication resource means) in the RLC/MAC header (the information or

CV' value or the length of the data queue, is embedded in a data block means) and this

field is called CV' (CV' may replace all or part of the CV field in the prior art), a coded

value of the length of the data queue means), paragraph [0061], lines 1-4), and the

controller is configured to use the length of a data queue is an indication of future of

communication resources for each of the first station (the mobile station transfer delay

sensitive data to the network and the CV' is different than 0 (the length of a data queue

is an indication of future of communication resources means) the network interprets that

the mobile station has more data blocks to be transmitted and the network assign

(allocating means) the next uplink transmit permission for the same mobile station,

paragraph [0062], lines 1-3, and when the CV' is set to "0", the network (the controller

means) give the next N uplink transmit permission to some other mobile station/stations (the first stations means, paragraph [0062], lines 3-5).

However, Forssell Mica does not expressly disclose a controller configured to control allocation of the communication resources. In an analogous art, Bruckert et al. disclose a controller configured to control allocation of the communication resources (the site controller (300) responds with resource allocation (401) (allocating the communications resources means) and the resource allocation (401) is transmitted to the requesting communication unit (200), col. 6, lines 16-21).

One skilled in the art would have recognized the controller configured to control allocation of the communication resources, and would have applied Bruckert et al.'s allocation resource in Forssell Mica's assign the next uplink transmit permission for the mobile station. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell Mica's method and arrangement for transferring real time data in a packet radio network with the motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 9, Forssell Mica discloses wherein said controller is part of said base station (figure 2, a radio resource control (RRC) layer 207 located in the base station subsystem BSS, paragraph [0011], lines 1-5).

For claim 13, Forssell Mica discloses wherein each of said first station transmits a transmission comprising a plurality of data blocks, and wherein the coded value of the length of a data queue of one of the first stations is provided in each of said data blocks

in the transmission associated with said one first station (the Countdown Value field CV

is sent by the mobile station to allow the network to calculate the number of RLC data

blocks remaining for the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data

block include information on whether the mobile station has more RLC data blocks to be

transmitted, and this information provided to the network in the RLC/MAC header (the

information or CV' value or the length of the data queue, is embedded in a data block

means) and this field is called CV' (CV' may replace all or part of the CV field in the prior

art), a coded value of the length of the data queue means), paragraph [0061], lines 1-4).

For claim 14, Forssell Mica discloses method and arrangement for transferring real

time data in a packet radio network, comprising:

a controller configured to (figure 2, a radio resource control (RRC) layer 207,

paragraph [0011], line 5)

control of communication resources for at least one mobile station, wherein the

control is based upon queue length information received from the mobile station that is

embedded in a data block (the Countdown Value field CV is sent by the mobile station

to allow the network to calculate the number of RLC data blocks remaining for the

current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block include information

on whether the mobile station has more RLC data blocks to be transmitted, and this

information provided to the network (the control of the communication resource means) in

the RLC/MAC header (the information or CV' value or the length of the data queue, is

embedded in a data block means) and this field is called CV' (CV' may replace all or

part of the CV field in the prior art), paragraph [0061], lines 1-4), and

use the queue length information as an indication of future need of

communication resources for the mobile station (the mobile station transfer delay

sensitive data to the network and the CV' is different than 0 (the queue length

information as an indication means) the network interprets that the mobile station has

more data blocks to be transmitted and the network assign (allocating means) the next

uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose a controller configured to control

allocation of the communication resources. In an analogous art, Bruckert et al. disclose a

controller configured to control allocation of the communication resources (the site controller

(300) responds with resource allocation (401) (allocating the communications resources

means) and the resource allocation (401) is transmitted to the requesting

communication unit (200), col. 6, lines 16-21).

One skilled in the art would have recognized the controller configured to control

allocation of the communication resources, and would have applied Bruckert et al.'s

allocation resource in Forssell Mica's assign the next uplink transmit permission for the

mobile station. Therefore, it would have been obvious to one of ordinary skill in the art at

the time of the invention, to use Bruckert et al.'s manifold antenna structure for reducing

reuse factors in Forssell Mica's method and arrangement for transferring real time data in a

packet radio network with the motivation being to respond with a resource allocation (col.

6, lines 16-21).

For claim 15, Forssell Mica discloses method and arrangement for transferring real

time data in a packet radio network, comprising:

a processor configured to (figure 2, a radio resource control (RRC) layer 207,

paragraph [0011], line 5)

a code representative of the length of a data queue embedded in a data block

(the Countdown Value field CV is sent by the mobile station to allow the network to

calculate the number of RLC data blocks remaining for the current uplink, paragraph

[0057], lines 5-6, the RLC/MAC data block include information on whether the mobile

station has more RLC data blocks to be transmitted, and this information provided to the

network (a processor means) in the RLC/MAC header (the information or CV' value or

the length of the data queue, a code representative of the length of a data queue

embedded in a data block means) and this field is called CV' (CV' may replace all or

part of the CV field in the prior art), paragraph [0061], lines 1-4), and

transmit data packets and said data block with said code included in the data block as

a field to a network element, wherein the length of the data queue is used by the network

element as an indication of future need of communication resources for the apparatus

(the mobile station transfer delay sensitive data to the network and the CV' is different

than 0 (said code included in the data block as a field to a network element, wherein the

length of the data queue is used by the network element as an indication of future need

of communication resources for the apparatus means) the network interprets that the

mobile station has more data blocks to be transmitted and the network assign

(allocating means) the next uplink transmit permission for the same mobile station,

paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose encode a data block. In an

analogous art, Bruckert et al. disclose encode a data block (the service request (400) is

received through distribution amplifier 1, encoded with the identity of the originating VNBA (1A)

within the receive matrix switch (Rx matrix) of the site controller (300), col. 6, lines 12-14).

One skilled in the art would have recognized the encode a data block, and would

have applied Bruckert et al.'s allocation resource in Forssell Mica's assign the next uplink

transmit permission for the mobile station. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention, to use Bruckert et al.'s manifold

antenna structure for reducing reuse factors in Forssell Mica's method and arrangement for

transferring real time data in a packet radio network with the motivation being to respond

with a resource allocation (col. 6, lines 16-21).

For claim 16, Forssell Mica discloses wherein the monitoring comprises receiving

data packets and wherein each of the data packets comprises the indication of the

length of the data queue is sent in every packet (the Countdown Value field CV is sent

by the mobile station to allow the network to calculate the number of RLC data blocks

remaining for the current uplink (monitoring a length of a data queue means), paragraph

[0057], lines 5-6), wherein the indication comprises a coded value of the length of the

data queue in the first network element , and wherein the length of the data queue is

embedded in a data block from the first network element (the RLC/MAC data block

include information (the indication means) on whether the mobile station has more RLC

data blocks to be transmitted, and this information provided to the network in the

RLC/MAC header (the information or CV' value or the length of the data queue, is

embedded in a data block means) and this field is called CV' (CV' may replace all or

part of the CV field in the prior art), a coded value of the length of the data queue

means), paragraph [0061], lines 1-4).

For claim 18, Forssell Mica discloses wherein the processor receives a plurality of

data packets and each of said data packets comprises said queue length information

(the mobile station transfer delay sensitive data to the network (the processor means)

and the CV' is different than 0 (the queue length information as an indication means) the

network interprets that the mobile station has more data blocks to be transmitted and

the network assign (allocating means) the next uplink transmit permission for the same

mobile station, paragraph [0062], lines 1-3).

For claim 19, Forssell Mica discloses wherein the transmitter is further configured

to transmit the indication in each data packet that is transmitted from the transmitter (the

mobile station transfer delay sensitive data to the network and the CV' is different than 0

(the indication in each data packet means) the network interprets that the mobile

station has more data blocks to be transmitted and the network assign (allocating

means) the next uplink transmit permission for the same mobile station, paragraph

[0062], lines 1-3).

For claim 20, Forssell Mica discloses method and arrangement for transferring real

time data in a packet radio network, comprising:

a code representative of a length of a data queue in a mobile station, wherein the

length of the data queue is embedded in a data block from the mobile station (the

Countdown Value field CV is sent by the mobile station to allow the network to calculate

the number of RLC data blocks remaining for the current uplink, paragraph [0057], lines

5-6, the RLC/MAC data block include information on whether the mobile station has

more RLC data blocks to be transmitted, and this information provided to the network (a

processor means) in the RLC/MAC header (the information or CV' value or the length of

the data queue, a code representative of the length of a data queue embedded in a data

block means) and this field is called CV' (CV' may replace all or part of the CV field in

the prior art), paragraph [0061], lines 1-4); and

controller means for controlling of communication resources (figure 2, a radio

resource control (RRC) layer 207, paragraph [0011], lines 1-5), and

the controller means is configured to use the queue length information as an

indication of future need of communication resources for the mobile station (the mobile

station transfer delay sensitive data to the network and the CV' is different than 0 (the

length of a data queue is an indication of future of communication resources means) the

network interprets that the mobile station has more data blocks to be transmitted and

the network assign (allocating means) the next uplink transmit permission for the same

mobile station, paragraph [0062], lines 1-3, and when the CV' is set to "0", the network

(the controller means) give the next N uplink transmit permission to some other mobile

station/stations (the first stations means, paragraph [0062], lines 3-5).

However, Forssell Mica does not expressly disclose decoder means for decoding a

data in a mobile station, wherein said decoder means is configured to decode and

provide information for the mobile station to the controller means. In an analogous art,

Bruckert et al. disclose decoder means for decoding a data in a mobile station, wherein

said decoder means is configured to decode and provide information for the mobile

station to the controller means (the site controller (300) decodes the request and

responds with a resource allocation, col. 4, lines 38-41).

One skilled in the art would have recognized the decoder means for decoding a

data in a mobile station, wherein said decoder means is configured to decode and

provide information for the mobile station to the controller means, and would have

applied Bruckert et al.'s allocation resource in Forssell Mica's assign the next uplink

transmit permission for the mobile station. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention, to use Bruckert et al.'s manifold

antenna structure for reducing reuse factors in Forssell Mica's method and arrangement for

transferring real time data in a packet radio network with the motivation being to respond

with a resource allocation, col. 4, lines 38-41).

For claim 21, Forssell Mica discloses method and arrangement for transferring real

time data in a packet radio network, comprising:

data queue means for receiving data packets (the mobile station checks in step

510, whether the RLC block is the last one in the buffer, paragraph [0068], lines 1-2);

a code representative of a length of the data queue means, wherein the means is

configured to embed the length of the data queue in a data block; and transmitter

means for transmitting said data packets and said data block to a network element,

wherein said code is included in the data block as a field (the Countdown Value field CV

is sent by the mobile station to allow the network to calculate the number of RLC data

blocks remaining for the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data

block include information on whether the mobile station has more RLC data blocks to be

transmitted, and this information provided to the network in the RLC/MAC header (the

information or CV' value or the length of the data queue, a code representative of a

length of the data queue means, wherein the means is configured to embed the length

of the data queue in a data block means) and this field is called CV' (CV' may replace

all or part of the CV field in the prior art), paragraph [0061], lines 1-4), and

the length of the data queue is used by the network element as an indication of

future need of communication resources for the apparatus (the mobile station transfer

delay sensitive data to the network and the CV' is different than 0 (said code included in

the data block as a field to a network element, wherein the length of the data queue is used

by the network element as an indication of future need of communication resources for

the apparatus means) the network interprets that the mobile station has more data

blocks to be transmitted and the network assign (allocating means) the next uplink

transmit permission for the same mobile station, paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose encoder means for encoding a

data block. In an analogous art, Bruckert et al. disclose encoder means for encoding a data

block (the service request (400) is received through distribution amplifier 1, encoded with the

identity of the originating VNBA (1A) within the receive matrix switch (Rx matrix) of the site

controller (300), col. 6, lines 12-14).

One skilled in the art would have recognized the encoder means for encoding a

data block, and would have applied Bruckert et al.'s allocation resource in Forssell Mica's

assign the next uplink transmit permission for the mobile station. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention, to use

Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell Mica's

method and arrangement for transferring real time data in a packet radio network with the

motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 22, Forssell Mica discloses method and arrangement for transferring real

time data in a packet radio network, comprising:

a code representative of a length of a data queue in a first network element,

wherein the length of the data queue is embedded in a data block and the data queue is

configured to receive the data block; and transmitting data packets comprising a field

comprising said code to a second network element, wherein said code is used when

allocating communication resources for a transmission between the first network

element and the second network element (the Countdown Value field CV is sent by the

mobile station to allow the network to calculate the number of RLC data blocks

remaining for the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block

include information on whether the mobile station has more RLC data blocks to be

transmitted, and this information provided to the network in the RLC/MAC header (the

information or CV' value or the length of the data queue, a code representative of a

length of the data queue means, wherein the means is configured to embed the length

of the data queue in a data block means) and this field is called CV' (CV' may replace

all or part of the CV field in the prior art), paragraph [0061], lines 1-4), and

the length of the data queue is used by the second network element as an

indication of future need of communication resources in the first network element (the

mobile station transfer delay sensitive data to the network and the CV' is different than 0

(said code included in the data block as a field to a network element, wherein the length of

the data queue is used by the network element as an indication of future need of

communication resources for the apparatus means) the network interprets that the

mobile station has more data blocks to be transmitted and the network assign

(allocating means) the next uplink transmit permission for the same mobile station,

paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose encoding a data block. In an

analogous art, Bruckert et al. disclose encoding a data block (the service request (400) is

received through distribution amplifier 1, encoded with the identity of the originating VNBA (1A)

within the receive matrix switch (Rx matrix) of the site controller (300), col. 6, lines 12-14).

One skilled in the art would have recognized the encoder means for encoding a

data block, and would have applied Bruckert et al.'s allocation resource in Forssell Mica's

assign the next uplink transmit permission for the mobile station. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention, to use

Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell Mica's

method and arrangement for transferring real time data in a packet radio network with the

motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 23, Forssell Mica discloses wherein the encoding of the code further

comprises encoding information about a transmit buffer of the first network element (the

mobile station checks in step 510, whether the RLC block is the last one in the buffer, if it is

the mobile station sets the parameter CV"= 0 means, paragraph [0068]).

For claim 24, Forssell Mica discloses wherein the encoding of the code further comprises encoding information on additional resources needed by said first network element (the CV' is different than 0 (information on the additional resources means) the network interprets that the mobile station has more data blocks to be transmitted and the network assign the next uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

For claim 25, Forssell Mica discloses wherein the first network element comprises a mobile station and the second network element comprises a base station of a wireless communication network (the mobile transmitted RLC/MAC data block to the network (base station means), paragraph [0061], lines 1-2).

For claim 26, Forssell Mica discloses wherein the controller is further configured to a code representative of the queue length information for mobile station (the Countdown Value field CV is sent by the mobile station to allow the network to calculate the number of RLC data blocks remaining for the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block include information on whether the mobile station has more RLC data blocks to be transmitted, and this information provided to the network (the controller means) in the RLC/MAC header (the information or CV' value or the length of the data queue, is embedded in a data block means) and this field is called CV' (CV' may replace all or part of the CV field in the prior art), paragraph [0061], lines 1-4).

However, Forssell Mica does not expressly disclose decode the information for the mobile station. In an analogous art, Bruckert et al. disclose decode the information for the

mobile station (the site controller (300) upon receiving the resource request (400) decodes the request, and responds with a resource allocation (401), col. 4, lines 38-41).

One skilled in the art would have recognized the decode the information for the mobile station, and would have applied Bruckert et al.'s allocation resource in Forssell Mica's assign the next uplink transmit permission for the mobile station. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell Mica's method and arrangement for transferring real time data in a packet radio network with the motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 27, Forssell Mica discloses wherein the code comprises information about a transmit buffer for the mobile station (the mobile station checks in step 510, whether the RLC block is the last one in the buffer, if it is the mobile station sets the parameter CV"= 0 means, paragraph [0068]).

For claim 28, Forssell Mica discloses wherein the code comprises information on the additional resources needed by each of the at least one mobile (the CV' is different than 0 (information on the additional resources means) the network interprets that the mobile station has more data blocks to be transmitted and the network assign the next uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

For claim 29, Forssell Mica discloses wherein the code further comprises information about a transmit buffer for the apparatus (the mobile station checks in step 510, whether the RLC block is the last one in the buffer, if it is the mobile station sets the parameter CV"= 0 means, paragraph [0068]).

For claim 30, Forssell Mica discloses wherein the code comprises information on the additional resources needed by said apparatus (the CV' is different than 0 (information on the additional resources means) the network interprets that the mobile station has more data blocks to be transmitted and the network assign the next uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

For claim 33, Forssell Mica discloses method and arrangement for transferring real time data in a packet radio network, comprising:

a processor configured to (figure 2, a radio resource control (RRC) layer 207, paragraph [0011], line 5)

monitoring a length of a data queue in a first network element as an indication of future need of communication resources in a first network element (the Countdown Value field CV is sent by the mobile station to allow the network to calculate the number of RLC data blocks remaining for the current uplink (monitoring a length of a data queue means), paragraph [0057], lines 5-6), wherein the indication comprises a coded value of the length of the data queue in the first network element , and wherein the length of the data queue is embedded in a data block from the first network element (the RLC/MAC data block include information (the indication means) on whether the mobile station has more RLC data blocks to be transmitted, and this information provided to the network in the RLC/MAC header (the information or CV' value or the length of the data queue, is embedded in a data block means) and this field is called CV' (CV' may replace all or part of the CV field in the prior art), a coded value of the length of the data queue means), paragraph [0061], lines 1-4); and

the communications resources based for a transmission between the first

network element and a second network element based on the indication (the mobile

station (the first network element means) transfer delay sensitive data to the network (a

second network element means) and the CV' is different than 0 (based on the indication

means) the network interprets that the mobile station has more data blocks to be

transmitted and the network assign (allocating means) the next uplink transmit

permission for the same mobile station, paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose allocating the communications

resources. In an analogous art, Bruckert et al. disclose allocating the communications

resources (the site controller (300) responds with resource allocation (401) (allocating

the communications resources means) and the resource allocation (401) is transmitted

to the requesting communication unit (200), col. 6, lines 16-21).

One skilled in the art would have recognized the allocating the communications

resources, and would have applied Bruckert et al.'s allocation resource in Forssell Mica's

assign the next uplink transmit permission for the mobile station. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention, to use

Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell Mica's

method and arrangement for transferring real time data in a packet radio network with the

motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 34, Forssell Mica discloses wherein the processor is further configure to

monitor information about a transmit buffer of the first network element (the mobile station

checks in step 510, whether the RLC block is the last one in the buffer, if it is the mobile

station sets the parameter CV"= 0 means, paragraph [0068]).

For claim 35, Forssell Mica discloses wherein the processor is further configure to

monitor information the additional resources needed for said first network element (the

CV' is different than 0 (information on the additional resources means) the network

interprets that the mobile station has more data blocks to be transmitted and the

network assign the next uplink transmit permission for the same mobile station,

paragraph [0062], lines 1-3).

For claim 36, Forssell Mica discloses wherein the first network element comprises

a mobile station and the second network element comprises a base station of a wireless

communication network (the mobile transmitted RLC/MAC data block to the network

(base station means), paragraph [0061], lines 1-2).

For claim 37, Forssell Mica discloses wherein the processor is further configured to

perform the monitoring by receiving data packets and wherein each of the data packets

comprises the indication of the length of the data queue is sent in every packet (the

Countdown Value field CV is sent by the mobile station to allow the network to calculate

the number of RLC data blocks remaining for the current uplink (monitoring a length of a

data queue means), paragraph [0057], lines 5-6), wherein the indication comprises a

coded value of the length of the data queue in the first network element , and wherein

the length of the data queue is embedded in a data block from the first network element

(the RLC/MAC data block include information (the indication means) on whether the

mobile station has more RLC data blocks to be transmitted, and this information

provided to the network in the RLC/MAC header (the information or CV' value or the

length of the data queue, is embedded in a data block means) and this field is called

CV' (CV' may replace all or part of the CV field in the prior art), a coded value of the

length of the data queue means), paragraph [0061], lines 1-4).

For claim 38, Forssell Mica discloses method and arrangement for transferring real

time data in a packet radio network, comprising:

monitoring means for monitoring a length of a data queue in a first network

element as an indication of future need of communication resources in a first network

element (the Countdown Value field CV is sent by the mobile station to allow the

network to calculate the number of RLC data blocks remaining for the current uplink

(monitoring a length of a data queue means), paragraph [0057], lines 5-6), wherein the

indication comprises a coded value of the length of the data queue in the first network

element , and wherein the length of the data queue is embedded in a data block from

the first network element (the RLC/MAC data block include information (the indication

means) on whether the mobile station has more RLC data blocks to be transmitted, and

this information provided to the network in the RLC/MAC header (the information or CV'

value or the length of the data queue, is embedded in a data block means) and this field

is called CV' (CV' may replace all or part of the CV field in the prior art), a coded value

of the length of the data queue means), paragraph [0061], lines 1-4); and

the communications resources based for a transmission between the first

network element and a second network element based on the indication (the mobile

station (the first network element means) transfer delay sensitive data to the network (a

second network element means) and the CV' is different than 0 (based on the indication

means) the network interprets that the mobile station has more data blocks to be

transmitted and the network assign (allocating means) the next uplink transmit

permission for the same mobile station, paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose allocating means for allocating

the communications resources. In an analogous art, Bruckert et al. disclose allocating

means for allocating the communications resources (the site controller (300) responds

with resource allocation (401) (allocating the communications resources means) and the

resource allocation (401) is transmitted to the requesting communication unit (200), col.

6, lines 16-21).

One skilled in the art would have recognized the allocating means for allocating the

communications resources, and would have applied Bruckert et al.'s allocation resource

in Forssell Mica's assign the next uplink transmit permission for the mobile station. Therefore,

it would have been obvious to one of ordinary skill in the art at the time of the invention,

to use Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell

Mica's method and arrangement for transferring real time data in a packet radio network with

the motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 39, Forssell Mica discloses method and arrangement for transferring real

time data in a packet radio network, comprising:

controlling of communication resources for a mobile station by a controller (figure

2, a radio resource control (RRC) layer 207, paragraph [0011], line 5), wherein the

controlling is based upon queue length information received from the mobile station that

is embedded in a data block (the Countdown Value field CV is sent by the mobile

station to allow the network to calculate the number of RLC data blocks remaining for

the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block include

information on whether the mobile station has more RLC data blocks to be transmitted,

and this information provided to the network (the control of the communication resource

means) in the RLC/MAC header (the information or CV' value or the length of the data

queue, is embedded in a data block means) and this field is called CV' (CV' may

replace all or part of the CV field in the prior art), paragraph [0061], lines 1-4), and

using, by the controller, the queue length information as an indication of future

need of communication resources for the mobile station (the mobile station transfer

delay sensitive data to the network and the CV' is different than 0 (the queue length

information as an indication means) the network interprets that the mobile station has

more data blocks to be transmitted and the network assign (allocating means) the next

uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose controlling allocation of the

communication resources. In an analogous art, Bruckert et al. disclose controlling

allocation of the communication resources (the site controller (300) responds with

resource allocation (401) (allocating the communications resources means) and the

resource allocation (401) is transmitted to the requesting communication unit (200), col.

6, lines 16-21).

One skilled in the art would have recognized the controlling allocation of the

communication resources, and would have applied Bruckert et al.'s allocation resource in

Forssell Mica's assign the next uplink transmit permission for the mobile station. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell Mica's method and arrangement for transferring real time data in a packet radio network with the motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 40, Forssell Mica discloses by the controller, a code representative of the queue length information for mobile station (the Countdown Value field CV is sent by the mobile station to allow the network to calculate the number of RLC data blocks remaining for the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block include information on whether the mobile station has more RLC data blocks to be transmitted, and this information provided to the network (the controller means) in the RLC/MAC header (the information or CV' value or the length of the data queue, is embedded in a data block means) and this field is called CV' (CV' may replace all or part of the CV field in the prior art), paragraph [0061], lines 1-4).

However, Forssell Mica does not expressly disclose decoding the information for the mobile station. In an analogous art, Bruckert et al. disclose decoding the information for the mobile station (the site controller (300) upon receiving the resource request (400) decodes the request, and responds with a resource allocation (401), col. 4, lines 38-41).

One skilled in the art would have recognized the decoding the information for the mobile station, and would have applied Bruckert et al.'s allocation resource in Forssell Mica's assign the next uplink transmit permission for the mobile station. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use

Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell Mica's method and arrangement for transferring real time data in a packet radio network with the motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 41, Forssell Mica discloses receiving a plurality of data packets and each of said data packets comprises said queue length information (the mobile station transfer delay sensitive data to the network (the processor means) and the CV' is different than 0 (the queue length information as an indication means) the network interprets that the mobile station has more data blocks to be transmitted and the network assign (allocating means) the next uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

For claim 42, Forssell Mica discloses wherein the decoding of code comprises decoding information about a transmit buffer for the mobile station (the mobile station checks in step 510, whether the RLC block is the last one in the buffer, if it is the mobile station sets the parameter CV"= 0 means, paragraph [0068]).

For claim 43, Forssell Mica discloses wherein the decoding of the code further comprises decoding information the additional resources needed for said first network element (the CV' is different than 0 (information on the additional resources means) the network interprets that the mobile station has more data blocks to be transmitted and the network assign the next uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

For claim 45, Forssell Mica discloses method and arrangement for transferring real time data in a packet radio network, comprising:

controlling means for controlling of communication resources for a mobile station (figure 2, a radio resource control (RRC) layer 207, paragraph [0011], line 5), the controlling means for performing the allocation based upon queue length information received from the mobile station that is embedded in a data block (the Countdown Value field CV is sent by the mobile station to allow the network to calculate the number of RLC data blocks remaining for the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block include information on whether the mobile station has more RLC data blocks to be transmitted, and this information provided to the network (the control of the communication resource means) in the RLC/MAC header (the information or CV' value or the length of the data queue, is embedded in a data block means) and this field is called CV' (CV' may replace all or part of the CV field in the prior art), paragraph [0061], lines 1-4), wherein

the controlling means is configured to use the queue length information as an indication of future need of communication resources for the mobile station (the mobile station transfer delay sensitive data to the network and the CV' is different than 0 (the queue length information as an indication means) the network interprets that the mobile station has more data blocks to be transmitted and the network assign (allocating means) the next uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose controlling allocation of the communication resources. In an analogous art, Bruckert et al. disclose controlling allocation of the communication resources (the site controller (300) responds with

resource allocation (401) (allocating the communications resources means) and the

resource allocation (401) is transmitted to the requesting communication unit (200), col.

6, lines 16-21).

One skilled in the art would have recognized the controlling allocation of the

communication resources, and would have applied Bruckert et al.'s allocation resource in

Forssell Mica's assign the next uplink transmit permission for the mobile station. Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention, to

use Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell

Mica's method and arrangement for transferring real time data in a packet radio network with

the motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 46, Forssell Mica discloses method and arrangement for transferring real

time data in a packet radio network, comprising:

a code representative of a length of a data queue embedded in a data block

in a first network element; and transmitting data packets and said data block with said

code included in the data block as a field to a second network element (the Countdown

Value field CV is sent by the mobile station to allow the network to calculate the number

of RLC data blocks remaining for the current uplink, paragraph [0057], lines 5-6, the

RLC/MAC data block include information on whether the mobile station has more RLC

data blocks to be transmitted, and this information provided to the network in the

RLC/MAC header (the information or CV' value or the length of the data queue, a code

representative of a length of the data queue means, configured to embed the length of

the data queue in a data block means) and this field is called CV' (CV' may replace all

or part of the CV field in the prior art), paragraph [0061], lines 1-4), and

the length of the data queue is used by the second network element as an

indication of future need of communication resources in the first network element (the

mobile station transfer delay sensitive data to the network and the CV' is different than 0

(said code included in the data block as a field to a network element, wherein the length of

the data queue is used by the network element as an indication of future need of

communication resources for the apparatus means) the network interprets that the

mobile station has more data blocks to be transmitted and the network assign

(allocating means) the next uplink transmit permission for the same mobile station,

paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose encoding a data block. In an

analogous art, Bruckert et al. disclose encoding a data block (the service request (400) is

received through distribution amplifier 1, encoded with the identity of the originating VNBA (1A)

within the receive matrix switch (Rx matrix) of the site controller (300), col. 6, lines 12-14).

One skilled in the art would have recognized the encoder means for encoding a

data block, and would have applied Bruckert et al.'s allocation resource in Forssell Mica's

assign the next uplink transmit permission for the mobile station. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention, to use

Bruckert et al.'s manifold antenna structure for reducing reuse factors in Forssell Mica's

method and arrangement for transferring real time data in a packet radio network with the

motivation being to respond with a resource allocation (col. 6, lines 16-21).

For claim 47, Forssell Mica discloses wherein said transmitting of said data

packets comprises transmitting a plurality of data packets, and wherein each of said

data packets comprises said code (the Countdown Value field CV is sent by the mobile

station to allow the network to calculate the number of RLC data blocks remaining for

the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block include

information on whether the mobile station has more RLC data blocks to be transmitted,

and this information provided to the network in the RLC/MAC header (the information or

CV' value or the length of the data queue, a code representative of a length of the data

queue means, configured to embed the length of the data queue in a data block means)

and this field is called CV' (CV' may replace all or part of the CV field in the prior art),

paragraph [0061], lines 1-4).

For claim 48, Forssell Mica discloses wherein the encoding of the code further

comprises encoding information about a transmit buffer for the first network element (the

mobile station checks in step 510, whether the RLC block is the last one in the buffer, if it is

the mobile station sets the parameter CV"= 0 means, paragraph [0068]).

For claim 49, Forssell Mica discloses wherein the encoding of the code further

comprises encoding information on additional resources needed by said first network

element (the CV' is different than 0 (information on the additional resources means) the

network interprets that the mobile station has more data blocks to be transmitted and

the network assign the next uplink transmit permission for the same mobile station,

paragraph [0062], lines 1-3).

For claim 51, Forssell Mica discloses method and arrangement for transferring real time data in a packet radio network, comprising:

a code representative of the length of a data queue embedded in a data block (the Countdown Value field CV is sent by the mobile station to allow the network to calculate the number of RLC data blocks remaining for the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block include information on whether the mobile station has more RLC data blocks to be transmitted, and this information provided to the network (a processor means) in the RLC/MAC header (the information or CV' value or the length of the data queue, a code representative of the length of a data queue embedded in a data block means) and this field is called CV' (CV' may replace all or part of the CV field in the prior art), paragraph [0061], lines 1-4), and

transmitting means for transmitting data packets and said data block with said code included in the data block as a field to a network element, wherein the length of the data queue is used by the network element as an indication of future need of communication resources for the apparatus (the mobile station transfer delay sensitive data to the network and the CV' is different than 0 (said code included in the data block as a field to a network element, wherein the length of the data queue is used by the network element as an indication of future need of communication resources for the apparatus means) the network interprets that the mobile station has more data blocks to be transmitted and the network assign (allocating means) the next uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose encode a data block. In an

analogous art, Bruckert et al. disclose encode a data block (the service request (400) is

received through distribution amplifier 1, encoded with the identity of the originating VNBA (1A)

within the receive matrix switch (Rx matrix) of the site controller (300), col. 6, lines 12-14).

One skilled in the art would have recognized the encode a data block, and would

have applied Bruckert et al.'s allocation resource in Forssell Mica's assign the next uplink

transmit permission for the mobile station. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention, to use Bruckert et al.'s manifold

antenna structure for reducing reuse factors in Forssell Mica's method and arrangement for

transferring real time data in a packet radio network with the motivation being to respond

with a resource allocation (col. 6, lines 16-21).

For claim 52, Forssell Mica discloses method and arrangement for transferring real

time data in a packet radio network, comprising:

a processor configured to (figure 2, a radio resource control (RRC) layer 207,

paragraph [0011], line 5)

a code representative of a length of a data queue in the apparatus, wherein the

length of the data queue is embedded in a data block and the data queue is configured

to receive the data block; and transmit data packets comprising a field comprising said

code to a network element, wherein said code is used when allocating communication

resources for a transmission between the apparatus and the network element (the

Countdown Value field CV is sent by the mobile station to allow the network to calculate

the number of RLC data blocks remaining for the current uplink, paragraph [0057], lines

5-6, the RLC/MAC data block include information on whether the mobile station has more RLC data blocks to be transmitted, and this information provided to the network in the RLC/MAC header (the information or CV' value or the length of the data queue, a code representative of a length of the data queue means, wherein the means is configured to embed the length of the data queue in a data block means) and this field is called CV' (CV' may replace all or part of the CV field in the prior art), paragraph [0061], lines 1-4), and

the length of the data queue is used by the network element as an indication of future need of communication resources in the apparatus (the mobile station transfer delay sensitive data to the network and the CV' is different than 0 (said code included in the data block as a field to a network element, wherein the length of the data queue is used by the network element as an indication of future need of communication resources for the apparatus means) the network interprets that the mobile station has more data blocks to be transmitted and the network assign (allocating means) the next uplink transmit permission for the same mobile station, paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose encode a data block. In an analogous art, Bruckert et al. disclose encode a data block (the service request (400) is received through distribution amplifier 1, encoded with the identity of the originating VNBA (1A) within the receive matrix switch (Rx matrix) of the site controller (300), col. 6, lines 12-14).

One skilled in the art would have recognized the encode a data block, and would have applied Bruckert et al.'s allocation resource in Forssell Mica's assign the next uplink transmit permission for the mobile station. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention, to use Bruckert et al.'s manifold

antenna structure for reducing reuse factors in Forssell Mica's method and arrangement for

transferring real time data in a packet radio network with the motivation being to respond

with a resource allocation (col. 6, lines 16-21).

For claim 53, Forssell Mica discloses wherein the code further comprises information

about a transmit buffer of the apparatus (the mobile station checks in step 510, whether the

RLC block is the last one in the buffer, if it is the mobile station sets the parameter CV"= 0

means, paragraph [0068]).

For claim 54, Forssell Mica discloses wherein the code further comprises information

on the additional resources needed by the apparatus (the CV' is different than 0

(information on the additional resources means) the network interprets that the mobile

station has more data blocks to be transmitted and the network assign the next uplink

transmit permission for the same mobile station, paragraph [0062], lines 1-3).

For claim 55, Forssell Mica discloses wherein the apparatus comprises a mobile

station and the network element comprises a base station of a wireless communication

network (the mobile transmitted RLC/MAC data block to the network (base station

means), paragraph [0061], lines 1-2).

For claim 57, Forssell Mica discloses method and arrangement for transferring real

time data in a packet radio network, comprising:

a code representative of a length of a data queue in the apparatus, wherein the

length of the data queue is embedded in a data block and the data queue is configured

to receive the data block; and transmitting means for transmitting data packets

comprising a field comprising said code to a network element, wherein said code is

used when allocating communication resources for a transmission between the

apparatus and the network element (the Countdown Value field CV is sent by the

mobile station to allow the network to calculate the number of RLC data blocks

remaining for the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block

include information on whether the mobile station has more RLC data blocks to be

transmitted, and this information provided to the network in the RLC/MAC header (the

information or CV' value or the length of the data queue, a code representative of a

length of the data queue means, wherein the means is configured to embed the length

of the data queue in a data block means) and this field is called CV' (CV' may replace

all or part of the CV field in the prior art), paragraph [0061], lines 1-4), and

the length of the data queue is used by the network element as an indication of

future need of communication resources in the apparatus (the mobile station transfer

delay sensitive data to the network and the CV' is different than 0 (said code included in

the data block as a field to a network element, wherein the length of the data queue is used

by the network element as an indication of future need of communication resources for

the apparatus means) the network interprets that the mobile station has more data

blocks to be transmitted and the network assign (allocating means) the next uplink

transmit permission for the same mobile station, paragraph [0062], lines 1-3).

However, Forssell Mica does not expressly disclose encode a data block. In an

analogous art, Bruckert et al. disclose encode a data block (the service request (400) is

received through distribution amplifier 1, encoded with the identity of the originating VNBA (1A)

within the receive matrix switch (Rx matrix) of the site controller (300), col. 6, lines 12-14).

One skilled in the art would have recognized the encode a data block, and would

have applied Bruckert et al.'s allocation resource in Forssell Mica's assign the next uplink

transmit permission for the mobile station. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention, to use Bruckert et al.'s manifold

antenna structure for reducing reuse factors in Forssell Mica's method and arrangement for

transferring real time data in a packet radio network with the motivation being to respond

with a resource allocation (col. 6, lines 16-21).

For claim 58, Forssell Mica discloses wherein the monitoring further comprises

monitoring a countdown value of the data block for an indication of the length of the

data queue (the Countdown Value field CV is sent by the mobile station to allow the

network to calculate the number of RLC data blocks remaining for the current uplink,

paragraph [0057], lines 5-6, the RLC/MAC data block include information on whether

the mobile station has more RLC data blocks to be transmitted, and this information

provided to the network in the RLC/MAC header (the information or CV' value or the

length of the data queue, a code representative of a length of the data queue means,

wherein the means is configured to embed the length of the data queue in a data block

means) and this field is called CV' (CV' may replace all or part of the CV field in the prior

art), paragraph [0061], lines 1-4).

For claim 59, Forssell Mica discloses wherein the controller is configured to

perform the allocation based on the queue length information included in a countdown

value of the data block (the Countdown Value field CV is sent by the mobile station to

allow the network to calculate the number of RLC data blocks remaining for the current

uplink, paragraph [0057], lines 5-6, the RLC/MAC data block include information on

whether the mobile station has more RLC data blocks to be transmitted, and this

information provided to the network in the RLC/MAC header (the information or CV'

value or the length of the data queue, a code representative of a length of the data

queue means, wherein the means is configured to embed the length of the data queue

in a data block means) and this field is called CV' (CV' may replace all or part of the CV

field in the prior art), paragraph [0061], lines 1-4).

For claim 60, Forssell Mica discloses wherein the processor is configured to

include the code representative of the queue length in a countdown value of the data

block (the Countdown Value field CV is sent by the mobile station to allow the network

to calculate the number of RLC data blocks remaining for the current uplink, paragraph

[0057], lines 5-6, the RLC/MAC data block include information on whether the mobile

station has more RLC data blocks to be transmitted, and this information provided to the

network in the RLC/MAC header (the information or CV' value or the length of the data

queue, a code representative of a length of the data queue means, wherein the means

is configured to embed the length of the data queue in a data block means) and this

field is called CV' (CV' may replace all or part of the CV field in the prior art), paragraph

[0061], lines 1-4).

For claim 61, Forssell Mica discloses wherein the encoding further comprises

encoding the code representative of the length of the data queue in a countdown value

of the data block (the Countdown Value field CV is sent by the mobile station to allow

the network to calculate the number of RLC data blocks remaining for the current uplink,

paragraph [0057], lines 5-6, the RLC/MAC data block include information on whether

the mobile station has more RLC data blocks to be transmitted, and this information

provided to the network in the RLC/MAC header (the information or CV' value or the

length of the data queue, a code representative of a length of the data queue means,

wherein the means is configured to embed the length of the data queue in a data block

means) and this field is called CV' (CV' may replace all or part of the CV field in the prior

art), paragraph [0061], lines 1-4).

For claim 62, Forssell Mica discloses wherein the processor is configured to

monitor a countdown value of the data block for the indication of the length of the data

queue (the Countdown Value field CV is sent by the mobile station to allow the network

to calculate the number of RLC data blocks remaining for the current uplink, paragraph

[0057], lines 5-6, the RLC/MAC data block include information on whether the mobile

station has more RLC data blocks to be transmitted, and this information provided to the

network in the RLC/MAC header (the information or CV' value or the length of the data

queue, a code representative of a length of the data queue means, wherein the means

is configured to embed the length of the data queue in a data block means) and this

field is called CV' (CV' may replace all or part of the CV field in the prior art), paragraph

[0061], lines 1-4).

For claim 63, Forssell Mica discloses wherein the controlling further comprises

performing the allocation based on the queue length information included in a

countdown value of the data block (the Countdown Value field CV is sent by the mobile

station to allow the network to calculate the number of RLC data blocks remaining for

the current uplink, paragraph [0057], lines 5-6, the RLC/MAC data block include

information on whether the mobile station has more RLC data blocks to be transmitted,

and this information provided to the network in the RLC/MAC header (the information or

CV' value or the length of the data queue, a code representative of a length of the data

queue means, wherein the means is configured to embed the length of the data queue

in a data block means) and this field is called CV' (CV' may replace all or part of the CV

field in the prior art), paragraph [0061], lines 1-4).

For claim 64, Forssell Mica discloses wherein the encoding further comprises

including the code representative of the queue length in a countdown value of the data

block (the Countdown Value field CV is sent by the mobile station to allow the network

to calculate the number of RLC data blocks remaining for the current uplink, paragraph

[0057], lines 5-6, the RLC/MAC data block include information on whether the mobile

station has more RLC data blocks to be transmitted, and this information provided to the

network in the RLC/MAC header (the information or CV' value or the length of the data

queue, a code representative of a length of the data queue means, wherein the means

is configured to embed the length of the data queue in a data block means) and this

field is called CV' (CV' may replace all or part of the CV field in the prior art), paragraph

[0061], lines 1-4).

For claim 65, Forssell Mica discloses wherein the processor is configured to

encode the code representative of the length of the data queue in a countdown value of

the data block (the Countdown Value field CV is sent by the mobile station to allow the

network to calculate the number of RLC data blocks remaining for the current uplink,

paragraph [0057], lines 5-6, the RLC/MAC data block include information on whether

the mobile station has more RLC data blocks to be transmitted, and this information

provided to the network in the RLC/MAC header (the information or CV' value or the

length of the data queue, a code representative of a length of the data queue means,

wherein the means is configured to embed the length of the data queue in a data block

means) and this field is called CV' (CV' may replace all or part of the CV field in the prior

art), paragraph [0061], lines 1-4).

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to TOAN D. NGUYEN whose telephone number is

(571)272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Trost can be reached on 571-272-7872. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. D. N./

Examiner, Art Unit 2472

/William Trost/

Supervisory Patent Examiner, Art Unit 2472